ACKNOWLEDGEMENTS

Thanks are due to the Indian Council of Agricultural Research, New Delhi for financing a scheme for "Studies on the Biology and Control of Bird Pests" under which the studies are carried out.

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## 16. BIRD FAUNA OF THE RICE CROP ECOSYSTEM IN PONDICHERRY REGION

In the rural economy of an agriculturist birds play a vital role since some birds are beneficial or useful to him and others claim a heavy toll of his produce. In this paper an attempt is made to list out the common species of birds both resident and migratory in this region. A detailed observation was made for the insectivorous avian fauna visiting the rice ecosystem throughout the years of 1978-80. The principal agro-ecosystem in Pondicherry region is rice-based and the irrigation needs are met mostly by Ousteri and Bahour tanks and by a network of tube wells. Light rains are received in the South-West monsoon months of July to September and heavy rains during the North-East monsoon months of October to December. The total annual precipitation is around 1200 mm. During the rainy months, the tanks get filled up. From May to February the double cropped wetlands receive canal water and the third crop receives water from tube wells. In some areas of this region paddy remains in fields throughout the year which supports a rich aquatic biome. The aquatic biome of the rice ecosystem includes the invertebrate fauna comprising insect pests like stem borers, leaf rollers, plant hoppers, earhead bugs, blackbugs, grasshoppers etc. The non-pest fauna include waterbugs, beetles, odonates and a variety of other insects. The paddy fields and water storing tanks also harbour fishes, crabs, frogs, snakes and aquatic insects which provide the conditions to attract a host of insectivorous birds to this region. The observations were made in the farm attached to the Krishi Vigyan Kendra and its vicinity, Ousteri and Bahour tanks, and in the different communes like Villianoor, Ariankuppam, Nettapakkam etc. The birds are classified in the following groups.

1. Very common — Seen in large numbers
2. Common — Seen in less numbers
3. Less common — Seen in less numbers and only in certain places
4. Rare — Seen in singles or in few in numbers occasionally.

The birds were compared for identity and

Table

| Common Name | Scientific Name | Status | Season |
|---|---|---|---|
| Paddybird | *Ardeola grayii* | Very common | Throughout |
| Cattle egret | *Bubulcus ibis* | Common | Oct-Feb |
| Redwattled lapwing | *Vanellus indicus* | Common | Throughout |
| Little ringed plover | *Charadrius dubius* | Common | Throughout |
| Pintail snipe | *Capella stenura* | Common | Oct-Feb |
| Blackwinged stilt | *Himantopus himantopus* | Common | Oct-Feb |
| Avocet | *Recurvirostra avosetta* | Rare | Oct-Feb |
| Indian whiskered tern | *Chlidonias hybrida* | Common | Oct-Feb |
| Spotted dove | *Streptopelia chinensis* | Very common | Throughout |
| Blue rock pigeon | *Columba livia* | Less common | Throughout |
| Red turtle dove | *Streptopelia tranquebarica* | Less common | Throughout |
| Roseringed parakeet | *Psittacula krameri* | Common | Throughout |
| Koel | *Eudynamys scolopacea* | Less common | Nov-Jan |
| Spotted owlet | *Athene brama* | Common | Throughout |
| Indian nightjar | *Caprimulgus asiaticus* | Less common | Throughout |
| House swift | *Apus affinis* | Very common | Throughout |
| Small blue Kingfisher | *Alcedo atthis* | Common | Throughout |
| Whitebreasted Kingfisher | *Halcyon smyrnensis* | Common | Throughout |
| Pied Kingfisher | *Ceryle rudis* | Common | Throughout |
| Small green bee-eater | *Merops orientalis* | Less common | Throughout |
| Indian roller | *Coracias benghalensis* | Common | Throughout |
| Blackbellied finchlark | *Eremopterix grisea* | Very common | Throughout |
| Crested lark | *Galerida cristata* | Very common | Throughout |
| Redrumped swallow | *Hirundo daurica* | Common | Throughout |
| Black drongo | *Dicrurus adsimilis* | Very common | Throughout |
| Common myna | *Acridotheres tristis* | Very common | Throughout |
| House crow | *Corvus splendens* | Very common | Throughout |
| Redvented bulbul | *Pycnonotus cafer* | Less common | Throughout |
| Jungle babbler | *Turdoides striatus* | Very common | Throughout |
| Ashy wren-warbler | *Prinia socialis* | Very common | Throughout |
| Indian robin | *Saxicoloides fulicata* | Common | Throughout |
| Large pied wagtail | *Motacilla maderaspatensis* | Common | Throughout |
| House sparrow | *Passer domesticus* | Very common | Throughout |
| Baya weaver bird | *Ploceus philippinus* | Common | Throughout |
| Spotted munia | *Lonchura punctulata* | Common | Throughout |

nomenclature with the authenticated guides by Fletcher and Inglis (1926), Salim Ali (1977) and Ganguli (1975) and the observations are presented in the table. Among the birds the black drongo, *Dicrurus adsimilis* seems to be a purely insectivorous bird destroying injurious insects like stemborer moths, skippers, leaf rollers etc. in enormous numbers. In company with crows and mynahs this bird is sure to be present in large numbers wherever pest in-

sects are predominant. Drongos were reported to feed mostly on injurious insects (Thirumurthi and Abraham 1975). The house crow, *Corvus splendens* and myna, *Acridotheres tristis* are highly beneficial to the agriculturists as they help to eradicate the soil insects and pupae at the time of ploughing and during and after the harvest. The paddy bird *Ardeola grayii*, always found in paddy fields and in watersheds, is very active and beneficial in fields where young seedlings are cut up by immature crabs. The stilt and pintail snipe found in marshes and paddy stubbles often probe into the mud for worms, larvae and other aquatic insects. The kingfishers, especially *Halcyon smyrnensis*, commonly noticed in rice fields, appear to be important in their predatory habit on insects.

Thus it is evident that certain birds like crow, myna, drongo, paddy bird are useful in the control of injurious insects and hence deserve to be protected and encouraged.

We wish to thank Master Christian Nathan son of the first author for his constant help in field trips and locating the habitats of birds.

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## 17. SIZE AT FIRST BREEDING IN THE GHARIAL [*GAVIALIS GANGETICUS* (GMELIN)] (REPTILIA, CROCODILIA) IN CAPTIVITY

Size and age at first breeding in the gharial in the wild are not known for either sex. In Katerniaghat Wildlife Sanctuary in Bahraich District, Northern Uttar Pradesh, the smallest breeding female was estimated as 3.12 m during 1977 nesting season (Srivastava 1981).

McCann (1940) in a well-reasoned discussion on the Indian mugger (*Crocodylus palustris*) in the wild, correctly, in our view, stated,

"However, with reptiles, I think, it is perhaps better to arrive at the size at which they breed rather than place any reliance on age."

For captive crocodilians in India prior to initiation of the Government of India Project Crocodile Breeding and Management in 1975, and in many overseas institutions (Bustard 1980) due to poor growth, age is not a valid criterion on which to judge attainment of sexual maturity (Choudhury and Bustard, in press).

Three gharial were reared in captivity at Nandankanan Biological Park, Orissa. This group comprised 1 male and two females. One of these females bred for the first time in 1980 (Bustard and Maharana 1980) at a